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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 10/769,756      | 02/03/2004  | Kyung-geun Lee       | 1293.1993           | 8918             |

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| EXAMINER |
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ALUNKAL, THOMAS D

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| ART UNIT | PAPER NUMBER |
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2627

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| MAIL DATE | DELIVERY MODE |
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07/13/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

|  |   |   |  |
|--|---|---|--|
| <p align="center"><b>Office Action Summary</b></p> | <p>Application No.</p> <p align="center">10/769,756</p> | <p>Applicant(s)</p> <p align="center">LEE, KYUNG-GEUN</p> |  |
|  | <p>Examiner</p> <p align="center">Thomas D. Alunkal</p> | <p>Art Unit</p> <p align="center">2627</p>                |  |

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1,7,8,16,22-25,27-31,33 and 34 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,7,8,16,22-25,27-31,33 and 34 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 February 2004 is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date: _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date: _____   | 6) <input type="checkbox"/> Other: _____                          |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 6/4/07 has been entered.

### ***Double Patenting***

Claim 16 objected to under 37 CFR 1.75 as being a substantial duplicate of claim 16. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1,7-8,16,22-25,27-28,31, and 33-34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda et al. (hereafter Ueda)(US PgPub 2001/0007545).

Regarding claim 1, Ueda discloses a read-only optical information storage medium (Figure 1A, Element 101), comprising a burst cutting area (Figure 1A, Element 102), a lead-in area (Figure 1A, Element 103), a user data area (Figure 1A, Element 104), and a lead-out area (Figure 1A, Element 105), wherein a pattern comprising a sequence of pits is repeated in an area of the disc (Paragraphs 0038 and 0039. Specifically, control data information ("00h") is repeatedly recorded in the lead-in area of the disc). Ueda does not disclose where the repeatedly recorded control information is recorded in the BCA.

However, both the BCA and the lead-in area of a disc are used to record control information pertaining to the disc. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the repeatedly recorded control information of the lead-in area to the BCA, motivation being to allow for re-read of a specific control data in another area of the BCA when first read operation fails.

Regarding claims 7 and 16, Ueda discloses wherein at least one of the burst cutting area, the lead-in area, the user data area, and the lead-out area is divided into a plurality of sub-areas in each of which pits are formed in different pit patterns (Figure 1B, Elements 106-109 where each sub-area contains different information).

Regarding claim 8, Ueda discloses wherein the lead-in area comprises first and second areas (Figures 2A, reference signal area and control data area), pits are formed in the first area in one of a third straight pit pattern and a third pit wobble pattern, and pits are formed in the second area in one of a fourth straight pit pattern and a fourth pit

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wobble pattern (Figure 2A and 2B. Specifically, information in the reference signal area and the control data area is different which inherently results in different pit patterns).

Regarding claim 22, Ueda discloses wherein the user area includes a plurality of basic recording units, and run-ins and run-outs that are respectively located before and after the basic recording units (Paragraph 0009).

Regarding claim 23, Ueda discloses wherein the basic recording units are one of physical clusters, sectors, ECC blocks, and frames (Paragraph 0009).

Regarding claim 24, Ueda discloses wherein a pattern of pits formed in the basic recording units is identical to a pattern of pits formed in the run-ins and run-outs. (Paragraph 0040).

Regarding claim 25, Ueda discloses a read-only optical information storage medium (Figure 1A, Element 101), comprising a burst cutting area (Figure 1A, Element 102), a lead-in area (Figure 1A, Element 103), a user data area (Figure 1A, Element 104), and a lead-out area (Figure 1A, Element 105), in which data is recorded in the form of pits, wherein a pattern comprising a sequence of pits provided in the burst cutting area is formed by a recording modulation method different from a recording modulation method used to form the pits in at least one of the lead-in area, the user data area, and the lead-out area (Paragraph 0023. Specifically, the means for forming pits in the BCA is different than the modulation methods used to form pits in the remainder of the disc) wherein a pattern comprising a sequence of pits is repeated in an area of the disc (Paragraphs 0038 and 0039. Specifically, control data information ("00h") is repeatedly

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recorded in the lead-in area of the disc). Ueda does not disclose where the repeatedly recorded control information is recorded in the BCA.

However, both the BCA and the lead-in area of a disc are used to record control information pertaining to the disc. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the repeatedly recorded control information of the lead-in area to the BCA, motivation being to allow for re-read of a specific control data in another area of the BCA when first read operation fails.

Regarding claim 27, Ueda discloses wherein the recording modulation method used in the burst cutting area is different from the recording modulation method used in at least one of the lead-in and the user data area (Paragraph 0023. Specifically, the means for forming pits in the BCA is different than the modulation methods used to form pits in the remainder of the disc).

Regarding claim 28, Ueda discloses wherein the recording modulation method used in the burst cutting area, the lead-in area, and the user data area is one of a RLL (d,k) modulation and a bi-phase modulation method (Figure 1A, Elements 103-105. Both modulation methods are conventionally used to record data into the lead-in, data, and lead-out areas).

Regarding claim 31, Ueda discloses a read-only optical information storage medium (Figure 1A) comprising: a plurality of recording layers having a plurality of areas (Paragraph 0041, two-layer disc) including a burst cutting area in which data is recorded in the form of pits (Figure 1A, Element 102) wherein a pattern comprising a sequence of pits is repeated in an area of the disc (Paragraphs 0038 and 0039.

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Specifically, control data information ("00h") is repeatedly recorded in the lead-in area of the disc). Ueda does not disclose where the repeatedly recorded control information is recorded in the BCA.

However, both the BCA and the lead-in area of a disc are used to record control information pertaining to the disc. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the repeatedly recorded control information of the lead-in area to the BCA, motivation being to allow for re-read of a specific control data in another area of the BCA when first read operation fails.

Regarding claims 33 and 34, Ueda discloses the reproducing apparatus (Paragraph 0022) used to reproduce contents of the read-only optical media of claims 1 and 25.

Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ueda and in view of Kondo (US PgPub 2003/0053404).

Regarding claim 29, Ueda discloses wherein at least one of the burst cutting area, the lead-in area, the user data, area, and the lead-out area is divided into a plurality of sub-areas (Figures 2A, 2B, and 2C). Ueda does not disclose the pits in the sub-areas are formed using different modulation methods.

In the same field of endeavor, Kondo discloses where two different modulation methods are used in the same recording area (Paragraph 0081). Thus, it would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to provide the modulation methods of Kondo to the recording medium of Ueda, motivation

being to selectively choose a proper modulation method based on the type of information recorded.

Regarding claim 30, Ueda discloses wherein the lead-in area comprises first and second sub areas, the first area uses one of the RLL(d,k) modulation method and the bi-phase modulation method (Paragraph 0094) and the second area uses a different recording modulation method from the first area (Paragraph 0081).

### ***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kondo et al (US 6,930,977) disclose an optical information recording medium. Lee (US 6,414,920) discloses a method for detecting synchronous information adapted to decode information recorded on the burst cutting area of an optical disc.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas D. Alunkal whose telephone number is (571)270-1127. The examiner can normally be reached on M-F 7:30-5:00.

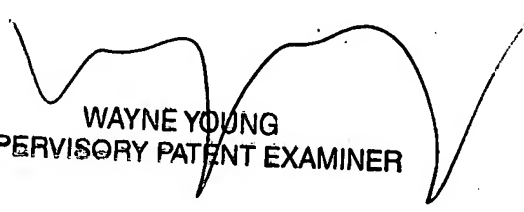
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wayne Young can be reached on (571)272-7582. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thomas Alunkal/  
Examiner AU 2627

  
WAYNE YOUNG  
SUPERVISORY PATENT EXAMINER